

**Translation**

**PATENT COOPERATION TREATY**

PCT/EP2003/013463



**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000054111	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. PCT/EP2003/013463	International filing date ( <i>day/month/year</i> ) 28 November 2003 (28.11.2003)	Priority date ( <i>day/month/year</i> ) 03 December 2002 (03.12.2002)
International Patent Classification (IPC) or national classification and IPC D06P 1/52		
Applicant BASF AKTIENGESELLSCHAFT		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>3</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand 06 May 2004 (06.05.2004)	Date of completion of this report 17 March 2005 (17.03.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/013463

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:

- ☐ international search (under Rules 12.3 and 23.1(b))  
☐ publication of the international application (under Rule 12.4)  
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ The international application as originally filed/furnished

☒ the description:

pages \_\_\_\_\_ 1-42 \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ 1-19 received by this Authority on 20 November 2004 (20.11.2004)

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the drawings:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/13463

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	1-10, 13-19	YES
	Claims	11, 12	NO
Inventive step (IS)	Claims	6, 10, 13-19	YES
	Claims	1-5, 7-9, 11, 12	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO

## 2. Citations and explanations

## 1 Reference is made to the following documents:

D1: DE 100 36 713 A (NIPPON CATALYTIC CHEM IND)

17 May 2001 (2001-05-17)

D2: US-A-3 097 046 (CLONINGER LAMAR C ET AL) 9 July

1963 (1963-07-09)

D3: US-A-3 097 048 (AXELSON ROBERT J ET AL) 9 July

1963 (1963-07-09)

D4: DATABASE WPI Section Ch, Week 198649 Derwent

Publications Ltd., London, GB; Class A14,

AN 1986-322487 XP002277524 & JP 61 239090 A (KAO  
CORP) 24 October 1986 (1986-10-24)2 INDEPENDENT CLAIM 1

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step (PCT Article 33(3)).

Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses (see column 7, lines 58 to 66 and example 2) the use of graft polymers as per the present claim 1 as

auxiliary agents in textile dyeing.

The subject matter of claim 1 differs from the known use in that the auxiliary agent is a levelling agent.

Nevertheless, if a person skilled in the art were to use the copolymers described in D1 as auxiliary agents in textile dyeing, he would also achieve a levelling effect.

Consequently, the subject matter of claim 1 does not involve an inventive step.

In addition, it is obvious from document D2 (see column 1, lines 11 to 15; column 2, lines 18 to 20 and column 6, lines 35 to 42) that copolymers as per the present claim 1 are also suitable levelling agents for textile dyeing.

3 INDEPENDENT CLAIM 2

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 2 does not involve an inventive step (PCT Article 33(3)).

Document D1 is considered the prior art closest to the subject matter of claim 2 and discloses (see example 2) the use of graft polymers as auxiliary agents in textile dyeing.

The subject matter of claim 2 differs from the known use in that the proportion of side chains on the graft polymer is greater than 35 wt.%.

The present invention can thus be considered to address the problem of developing alternative graft polymers that are suitable as auxiliary agents in textile dyeing.

The solution proposed in claim 2 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons: D1 indicates (see column 2, lines 25 to 43) that the graft components should be in a proportion of 0.1 to 1.2 parts by weight per 1 part by weight of the polyether main chain. This corresponds to a proportion of side chains on the graft polymer of 9 to 55 wt. %.

4 DEPENDENT CLAIMS 3-4

Dependent claims 3 and 4 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step.

5 INDEPENDENT CLAIM 5

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 5 does not involve an inventive step (PCT Article 33(3)).

Document D1 is considered the prior art closest to the subject matter of claim 5 and discloses (see example 2) auxiliary agents for textile dyeing that are suitable as stripping agents.

The subject matter of claim 5 differs from the known use in that the proportion of side chains on the graft polymer is greater than 35 wt.%. .

The present invention can thus be considered to address the problem of developing alternative graft polymers that are suitable as stripping agents.

The solution proposed in claim 5 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons: D1 indicates (see column 2, lines 25 to 43) that the graft components should be in a proportion of 0.1 to 1.2 parts by weight per 1 part by weight of the polyether main chain. This corresponds to a proportion of side chains on the graft polymer of 9 to 55 wt.%. .

6 INDEPENDENT CLAIM 6

Document D3 is considered the prior art closest to the subject matter of claim 6 and discloses (see column 1, lines 11 to 29) a method for stripping faulty dyeing from textile materials.

The subject matter of claim 6 differs from the known method in that the stripping agent is a graft polymer as per the present claim 6.

The subject matter of claim 6 is thus novel (PCT Article 33(2)).

The present invention can thus be considered to address the problem of finding an alternative stripping agent.

The solution to this problem proposed in claim 6 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons: the cited documents do not suggest that the graft polymers mentioned in claim 6 are suitable as stripping agents.

Although it is obvious from D1 to use this type of polymer in a method for dyeing textiles, D1 does not indicate the use of these polymers in a stripping method.

7 CLAIMS 7 AND 8

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 7 does not involve an inventive step (PCT Article 33(3)).

Document D1 is considered the prior art closest to the subject matter of claim 7 and discloses (see example 2) auxiliary agents for textile dyeing that are suitable as levelling agents.

The subject matter of claim 7 differs from the known use in that the proportion of side chains on the graft polymer is greater than 35 wt.%.

In view of the comments made under point 5, a person skilled in the art would consider it routine procedure to combine all the features listed in claim 7.

Dependent claim 8 does not contain any features which, in combination with the features of any claim

to which it refers, meet the PCT requirements for inventive step.

8 INDEPENDENT CLAIM 9

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 9 does not involve an inventive step (PCT Article 33(3)).

Document D2 discloses (see column 1, lines 11 to 27) a method for levelling textile material dyes, poly-N-vinyl-5-methyl-2-oxazolidinone being used as levelling agent. The subject matter of claim 9 cannot be considered inventive, since D2 indicates (see column 6, lines 35 to 42) that copolymers of poly-N-vinyl-5-methyl-2-oxazolidinone with vinyl pyridine can be used in the method.

9 DEPENDENT CLAIM 10

The combination of features contained in dependent claim 10 is neither disclosed nor suggested by the available prior art.

10 CLAIMS 11 AND 12

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claims 11 and 12 lacks novelty (PCT Article 33(2)).

Document D1 discloses (see example 2) a graft polymer that contains two monoethylenically unsaturated monomers, each monomer containing a



nitrogenous heterocycle. Since that agent can be used as stripping agent, levelling agent and resoaping agent, the subject matter of claims 11 and 12 lacks novelty.

11 CLAIMS 13-19

Document D4 is considered the prior art closest to the subject matter of claim 13 and discloses (see the **abstract**) a method for cleaning dyed textiles, a vinyl-pyrrolidone copolymer being used.

The subject matter of claim 13 differs from the known method in that the copolymer contains a further comonomer that has at least one nitrogenous heterocycle.

The subject matter of claim 13 is thus novel (PCT Article 33(2)).

The present invention can be considered to address the problem of finding an alternative copolymer for cleaning dyed textiles. The solution to this problem as proposed in claim 13 of the present application involves an inventive step (PCT Article 33(3)), since the alternative comonomers proposed in D4 do not contain a heterocycle; the subject matter of claim 13 is therefore not obvious to a person skilled in the art.

Claims 14 to 19 are dependent on claim 13 and therefore likewise meet the PCT requirements for novelty and inventive step.